Guide to the
Open Geospatial Consortium (OGC)

2016 Version

ACKNOWLEDGMENTS

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SECTION 1: HOW TO GET STARTED AS A NEW OGC MEMBER

The purpose of this document is to explain how to get the most out of your OGC membership.

The OGC is a collaborative, global voluntary consensus standards organization focused on the discussion and resolution of interoperability issues in the geospatial domain. The key words are "collaboration" and "consensus". Every member has the opportunity to participate, contribute, and have a voice in the development and approval of OGC standards.

MEMBERSHIP – RIGHTS AND RESPONSIBILITIES BY LEVEL

OGC's international membership includes universities, national government agencies, local government agencies, earth imaging vendors, content providers, database software vendors, integrators, computing platform vendors and other technology providers. Members work together to reach agreement on OGC standards for interfaces, schemas and architectures.

WHAT CAN ALL MEMBERS DO?

Regardless of level, there are activities in which *all* members can participate:

- Develop OGC Standards!
- Network with other OGC members!
- Attend meetings – standards discussions, domain requirements discussions, and some voting. Depending on membership level, the Member Organization receives one or more free registrations. Members can purchase additional meeting registrations.
- Attend teleconferences – communications and discussions between and during meetings
- Participate in e-mail lists – communications and discussions between meetings
- Access the member portal – all in progress documents, email lists and archives, detailed meeting information, training, calendar, and much more
- Use the OGC logo for communication and outreach material (Membership Level Logos: http://portal.opengeospatial.org/files/?artifact_id=4447)

An overview of each Membership level is below. For more details online see: http://www.opengeospatial.org/ogc/join/levels.

ASSOCIATE MEMBER

- Voting access to OGC Technical Committee (TC) Domain Working Groups (DWG) and Standards Working Groups (SWG)
- One pass to OGC Technical Committee and Planning Committee meetings
- Access to members-only OGC documents

- Forums for peer-to-peer networking
- Webinars with technology providers and advanced technology users

TECHNICAL MEMBER

- Associate Member privileges
- Technical Committee voting rights
- Two passes to OGC Technical Committee and Planning Committee meetings
- Discounts on OGC compliance certification

PRINCIPAL MEMBER

- Technical Member privileges
- Voting participation in the OGC Planning Committee
- Four passes to OGC Technical Committee and Planning Committee meetings
- 24 dedicated OGC staff hours/year
- Ability to assign small number of Associate memberships
- Member logo on OGC Web site
- Co-host OGC Webinar

STRATEGIC MEMBER

- Principal Member privileges
- Voting in the OGC Strategic Member Advisory Committee
- 20 free meeting registrations to quarterly Technical & Planning Committee meetings
- 40 dedicated OGC staff hours/year

MEMBER PORTAL

The members-only portal provides access to documents, training, calendars, and other members. Portal link: https://portal.opengeospatial.org

COMMON FAVORITE DESTINATIONS

- *My Today* – default first screen contains scheduled events, active project, assigned actions, and artifact watch https://portal.opengeospatial.org/?m=public&orderby=default&tab=0
- *Pending Documents* – documents actively being discussed and updated https://portal.opengeospatial.org/?m=public&orderby=default&tab=2
- *Voting* – Status on "Active Project Voting" section on *My Today* tab

Figure: OGC Portal

The *Main* section of the portal is the default entry page

1. My Today
2. News & Events – recent news, upcoming events, and current requests/initiatives
3. Pending Documents
4. Historical Voting/IPR – links to TC open and completed votes since 2011 and search for votes prior to May 2011
5. Meetings – links to past and upcoming meeting details and documentation
6. Member Resources – links to key Web site pages, reference documentation, portal pages, and others
7. Observer Agreement – sign up to observe Intellectual Property Rights (IPR)-restricted groups (e.g., SWGs or Interoperability Program projects)

The *Projects* section shows active and archived project details by program

1. Communications and Outreach Program
2. Compliance Program
3. Interoperability Program (IP)
4. Standards Program (SP)

The *Files* section gives hierarchical file storage of documents for the OGC programs

The *Calendar* view shows all meetings with the ability to filter by event category and project.

The *Tasks* section provides members with to-do list management with task priority, status, and other information.

The *Tickets* section allows trouble ticket submissions and open tickets viewing.

The *Users* section gives contact information about other members with the ability to search by name, organization, or e-mail. A public list of OGC members is here: http://www.opengeospatial.org/ogc/members.

The *My Account* section, on the upper right corner, top menu bar, lets you change your information:

- Account Profile – update your information
- Artifact Watches – manage artifact watches on files and directories
- Project Access – with role access level
- E-mail Subscriptions – manage discussion list subscriptions (see next section) and access list archives
- Event Registration – online registration and payment for meetings and other events
- Organization Participation – details about your organization's participation in meetings, voting, other contributions, and portal usage

Get Portal help here: https://portal.opengeospatial.org/?m=ticketsmith#.

E-MAIL DISCUSSION LISTS

The OGC Technical Committee e-mail lists include two categories of discussion lists: the mandatory Announce and Discuss lists and Working Group (WG)/topic lists. The Announce and Discuss lists (TC-Announce and TC-Discuss, respectively) are moderated: TC-Announce is only for OGC Staff announcements to members, posting of calls for presentations at TC Meetings, and notifications of agendas. TC-Discuss is for member discussion on topics of general interest and/or not covered by WG lists; this is also a place for moderated posting of conferences or meetings of interest to OGC members.

The Standards-related and Domain-related discussion lists are un-moderated so that anyone can express their opinions about issues affecting a standard or topic. There is an e-mail list for every WG. An e-mail list can be OGC Members only or public; public lists require approval of the members of the respective WG. Any OGC Member in good standing can subscribe to any OGC Technical Committee e-mail list. Note that attending an OGC WG meeting does not automatically include addition to its mailing list.

HOW TO JOIN A LIST

Manage your e-mail subscriptions on the OGC Portal:

https://portal.opengeospatial.org/index.php?m=users&a=viewuser&tab=3.

Find lists to join on the "Subscribe to Additional Lists" tab. Each subscription list has a "Click to Subscribe" link.

Figure: List Subscriptions

One can subscribe to SWG mailing lists for any active observable group by completing the Observer Agreement.

WHICH LISTS TO JOIN

- Anyone with a Portal account is subscribed to the OGC Technical Committee announcement mailing list (TC-Announce via tc-announce@lists.opengeospatial.org). It's important that an organization's key people are included in the TC-Announce list. Announcements sent on this list include pre and post meeting information, information on Pending Documents, RFC announcements, and calls for votes.
- Those who are interested in TC-wide technical discussions subscribe to the TC Technical Discussion list (TC-Discuss via tc-discuss@lists.opengeospatial.org)
- People who want to participate in more detailed discussions for a given domain may also join the particular set of working group or initiative discussion lists relevant to their interests.

Please exercise proper e-mail etiquette (see the OGC Principles of Conduct: http://www.opengeospatial.org/ogc/policies/conduct; OGC lists are not for companies or individuals to solicit or advertise). OGC retains archives of all lists.

MEETINGS

WHAT WILL YOU DO?

In OGC meetings, you will meet with Member representatives from numerous OGC member organizations from dozens of countries – with everyone interested in geospatial standards across a wide variety of domains. The meetings follow OGC procedures for standards advancement. By working with others to develop and test geospatial standards,

you will be advancing the geospatial industry, advancing domains served by those standards, representing your organization, and expanding your career.

More information and lists of meetings are on the portal section *Main – Meetings*: https://portal.opengeospatial.org/?m=public&orderby=default&tab=4
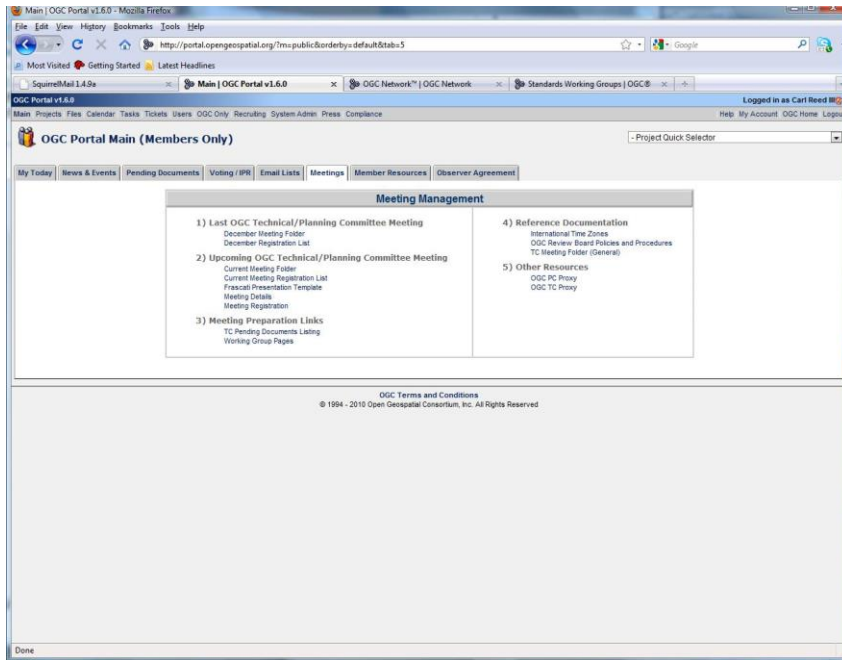
Figure: Meeting page on OGC Portal

PURPOSE

The meetings are where *you* influence decisions by discussing problems and their potential solutions. OGC meetings are working sessions and also offer opportunities for social and business networking.

DECIDING TO ATTEND

OGC meetings are the best way to engage in the process of developing and testing geospatial standards. Your voice is important and is best heard at meetings. TC meeting attendees are members of the OGC. The TC Chair sometimes adds invited speakers or other invited guests. Any TC member may send another representative of their organization as a substitute to a TC meeting, along with a written proxy statement for voting.

Meeting attendance is voluntary, but as described provides an excellent opportunity to network with other members.

PREPARATION

Members, newcomers and longtime members alike, should arrive prepared for the working group meetings they plan to attend. To prepare, read the documents distributed by a document editor, working group or the Technical Committee Chair. Also important is to follow the discussions on the working group's e-mail/discussion list and to review the relevant archives. For the document editors and working group chairs, adequate preparation requires posting documents and announcing an agenda several weeks before meetings.

Relevant meeting documents are in the OGC Portal section *Main - Pending Documents*: https://portal.opengeospatial.org/?m=public&orderby=default&tab=2.

These documents, especially standards documents, form the foundation for many of the discussions and votes. Under the TC policies and procedures members must submit any document that is to be discussed and voted on by the members at least three weeks prior to a given meeting. Announcements for the availability of a new pending document are sent to the TC-Announce list.

NEWCOMER TRAINING

Newcomers are encouraged to attend the New Members' Orientation on Monday morning, which is especially designed for first-time attendees. The orientation is organized and conducted by the TC Chair and is intended to provide useful introductory information. The session covers the structure of the OGC, and many other essential and enlightening topics for new OGCers.

TC CHAIR

The TC Chair is responsible for facilitating the progress and work of the Technical Committee. The TC Chair is a post held by appointment of the OGC President, to lead the activities of the TC. More details on the role: http://docs.opengeospatial.org/pol/05-020r20/05-020r20.html#5.

MEMBER PARTICIPATION

At a working group chair's discretion, some time may be devoted to bringing new working group attendees up to speed. As a rule, however, a working group is not the place to go for training. Observers are always welcome, but they must realize that the work effort cannot be delayed for education. Anyone wishing to attend a working group for the first time might seek out the chair prior to the meeting and ask for some introduction.

WG MEETINGS

The heart of an OGC TC meeting is the WG meetings themselves. Different WGs chairs have very different styles, so it is impossible to generalize how a WG meeting will feel. Even though nearly all WGs have agendas for their meetings, some meetings stick tightly to their agenda while others are run more loosely.

There are a few important things that are true for all WG meetings at an OGC meeting. Near the beginning of the meeting, the chair will pass around the "meeting attendance sheets", which are paper forms on which everyone prints their name and puts their email address. These are used for long-term archival purpose to show how many people came to a particular meeting and, in rare cases, exactly who showed up. The normal etiquette is to watch where the sheets came from and to pass them along in the same direction.

When speaking in a meeting, you should always raise your hand. For controversial topics, there will be queue of people wanting to speak, but never hesitate to speak if you have a question or a contribution to the discussion. The WG chair or presenter will indicate when you can speak. Remember that many WG meetings have remote attendees. Therefore, if there is a microphone in the room, please use the mic and speak slowly and clearly. This allows the people listening remotely and in the room to hear your question or comment. It is also expected that you will say your name so that the person taking minutes will know who is speaking.

VOTING

During a TC meeting, various votes occur in the WGs and in the TC Plenary. The majority of these votes have to do with a standard. Votes may be, for example, on changes in content, for standard adoption, or change of status for an OGC document. Any OGC member who is also a member of a Domain Working Group (DWG) can vote in that DWG. Any OGC member who is a Charter or Voting member of a Standards Working Group (SWG) may vote in that SWG. During a TC Plenary, votes relate to the adoption of candidate standards and other documents, such as best practices and white papers. For these votes, only OGC Technical Committee and higher members may vote. However, anyone can contribute to the discussion that precedes a vote.

Vote Type	Who can Vote
White Paper, Discussion Paper, or Engineering Report	Any member except an Individual Member
Election of TC reps to the PC	Any member except an Individual Member
Approval of a DWG Charter	Any member except an Individual Member
Approval of deprecation or retirement of DP or BP	Any member except an Individual Member
Approval of an OGC Best Practices Document	TC Voting Member
Approval for adoption of an OGC Standard	TC Voting Member
Approval of a revision of an OGC standard	TC Voting Member
Approval of a new TC P&P or other policy document	TC Voting Member
Election of members of the OGC Architecture Board	TC Voting Member

Figure: Voting

Read more about TC voting here: http://docs.opengeospatial.org/pol/05-020r20/05-020r20.html#21.

MEETING LOCATIONS

Four OGC TC meetings are held each year. One is held in Asia/Oceania. The other three are held in Europe and North America, alternating yearly between two in North America and one in Europe and two in Europe and one in North America. Meeting details along with lodging information are on each meeting information page.

FREQUENCY AND LENGTH

There are four meetings each year. Meetings tend to be mid-March, early June, and late September or early October and early December. Typically the TC meetings last four days, starting on a Monday morning and finishing with the Closing TC Plenary, usually on Thursday afternoon. The Planning Committee meetings immediately follow the Closing TC Plenary, usually on Friday.

MEETING FEES

OGC Members receive a specific number of complimentary registrations for each meeting, based upon their organization's level of membership. Of course more staff of a member organization can participate at the TC meetings. The fee schedule is published along with meeting information.

REGISTRATION

In order to attend a TC and/or PC meeting, you must register. For members, online registration is easiest. Go to your *My Account – Event Registration* section of the portal: https://portal.opengeospatial.org/?m=users&a=viewuser&tab=4. Registration instructions are here: https://store.opengeospatial.org/memberfaq.

DRESS CODE

Please dress for comfort. Most wear business casual clothes. Suits and shorts are observed at many meetings, but neither is common. You will almost never see a corporate logo on a shirt.

SPONSORSHIPS

One or more OGC members sponsor each meeting and may also provide the host venue. Meeting sponsorships provide broad support to the OGC process and significant visibility for the sponsors through press releases, recognition by speakers at dinners and plenary sessions, and meeting signage and photos.

PROCEDURAL GUIDANCE

Wireless internet access is always provided to all attendees and it is not unusual for every participant in a session to have an open computer or tablet. Most discussions in meetings follow documents or presentations posted on the OGC portal and are accessed by attendees. All members recognize that the majority of participants have day jobs and sometimes must do non-OGC work during meetings. But all members are encouraged to save other work for breaks and time outside of meetings so that everyone can contribute to WG sessions.

WG sessions can be informative, be focused on working on documents, or a mix. DWG meetings often have a number of presentations on the topics covered by the DWG or to introduce new concepts to the DWG. However, DWG sessions also hear reports from Interoperability Program initiatives and work on Discussion Papers or Best Practices.

SWG meetings focus on planning, writing, and editing a Standard. To ensure productive meetings, the OGC encourages WGs, especially SWGs, to meet via teleconference and e-mail between in-person OGC meetings.

Because the OGC is primarily a standards development organization, that work is the most rigorous in process and procedure. In very brief summary, there are five steps to create a Standard:

1. Identify requirements;

2. Form a Standards Working Group (SWG);

3. Write the Standard;

4. Submit the Standard for internal review and public comment. Then,

5. OGC members vote to approve Standard.

At all times during this process, SWG members are encouraged to actively participate in the process. All ideas are welcome and needed early in the process. As the standard evolves, the SWG becomes more focused on working through details. A general rule-of-thumb is that issues already discussed and decided should not be reopened after two or so meetings have passed, as this significantly slows the process.

All OGC standards are subject to improvement and evolution. Anyone can provide the OGC with a formal change request proposal. These proposals are the basis for new work items for or corrections to any given OGC standard. When the OGC receives change requests the appropriate SWG discusses and votes on the disposition of the change request. Change requests can also justify forming a new SWG. Any member or non-member can submit a Change Request Proposal using the public Change Request Submission application at

http://portal.opengeospatial.org/public_ogc/change_request.php.

SOCIAL EVENTS AT TC MEETINGS

The OGC plans social events for in-person meetings. The social event gives people the opportunity to meet on a social, rather than technical, level. Sometimes the event is a dinner or excursion hosted by the meeting sponsor. All registered OGC members and guests may attend these social events. The OGC and its sponsors usually welcome spouses/partners; as a courtesy to the host, please ask prior to attending.

AGENDA DETERMINATION & GENERAL STRUCTURE

According to OGC procedures, WG chairs begin making meeting time requests well in advance of the next TC meeting. For more popular meetings, the agenda may fill up more than eight weeks in advance. The current agenda is always on the meeting pages linked to on the OGC Web Site Events page:

http://www.opengeospatial.org/event?category=ogctcpc

The OGC provides the final agenda in the week preceding the meeting. The agenda includes assignments for breakout rooms and a map showing the room locations. Some working groups meet multiple times during a meeting and the OGC tries to have a working group meet in the same room each session. Yet sometimes room assignments change during the week. The OGC posts changes on a bulletin board near the OGC meeting registration desk.

OTHER POLICIES

PRINCIPALS OF CONDUCT

The work of the OGC relies on cooperation among a broad diversity of peoples, ideas, and communication styles. The *Principles of Conduct* guides our interactions with a focus on mutual respect. All OGC process participants should follow these Principles as we build consensus in person, at OGC meetings, in teleconferences, and in e-mail. For specifics, see the *Principals of Conduct* document:

http://www.opengeospatial.org/ogc/policies/conduct.

If conflicts arise, the OGC resolves them according to the procedures outlined in the *TC Policies and Procedures* http://docs.opengeospatial.org/pol/05-020r20/05-020r20.html and the *IP Policies and Procedures:* http://www.opengeospatial.org/ogc/policies/ippp.

INTELLECTUAL PROPERTY RIGHTS, COPYRIGHT, AND TRADEMARKS

OGC's Intellectual Property Rights ("IPR") policy helps minimize the possibility of inadvertent infringement of the IPR of Members and third parties using or implementing any OGC Standards. OGC's IPR policies reflect the mainstream of current standard-setting best practices. Please read the current policy at http://www.opengeospatial.org/about/ipr and the IPR Frequently Asked Questions: http://www.opengeospatial.org/ogc/legalfaq.

OGC copyrights its documents and other materials. OGC also owns several trademarks.

Members should follow use guidelines: http://www.opengeospatial.org/ogc/legal.

ANTITRUST COMPLIANCE

Broadly stated, the basic objective of the US antitrust laws is to preserve and promote competition and the free enterprise system. These laws are premised on the assumption that private enterprise and free competition are the most efficient ways to allocate resources, to produce goods at the lowest possible price and to assure the production of high quality products. These laws require that business people make independent business decisions without consultation or agreement with competitors. The success of OGC requires that free and open competition be adhered to as the policy of OGC and that all OGC members follow this policy.

The OGC has strict anti-trust policies that conform to both U.S. and International law. OGC members should read and follow the OGC anti-trust policy: http://www.opengeospatial.org/ogc/antitrust. Any specific questions relating to antitrust compliance not addressed in the written policy should be referred to counsel for OGC or to your own legal counsel who has responsibility for considering the antitrust implications of the business activities in question.

BYLAWS

OGC's bylaws describe the purpose, operations, and legal structure of the organization. The current bylaws document is at:

http://portal.opengeospatial.org/files/?artifact_id=6947.

SECTION 2: OGC MISSION AND OPERATION

WHAT THE OGC IS: GEOSPATIAL STANDARDS CONSORTIUM

The OGC is a collaborative, global voluntary consensus standards organization that provides a forum for the discussion and resolution of interoperability issues in the geospatial domain.

The OGC Mission is to advance the development and use of international standards and supporting services that promote geospatial interoperability. To accomplish this mission, OGC serves as the global forum for the collaboration of geospatial data / solution providers and users.

Overview Video: http://youtu.be/bfkCdir-yO8

For more details see: http://www.opengeospatial.org/ogc

WHAT THE OGC DOES: WORK PRODUCTS

STANDARDS

The primary product of the OGC is a "standard." A standard is a document that details the engineering aspects (and rules) for implementing an interface or encoding that solves a specific geospatial interoperability problem. OGC members define, discuss, test, and approve these documents by using a formal process. You can review information and find downloads of the currently approved OGC standards at www.opengeospatial.org/standards.

OGC standards are open standards and free to the public via the OGC Web site. New members should visit this site and become familiar with its structure and contents. The Web site combined with e-mail lists and teleconferencing is one of the primary modes of communication for the OGC membership.

OVERVIEW OF OGC STANDARDS

OGC standards involve any technology that requires geospatial interoperability. Technology coverage areas include Web services, data models, mobile platforms, encoding, and markup languages. The OGC also oversees efforts focusing on many industry domains, via DWGs.

The OGC Web site lists all OGC standards and their documentation:

http://www.opengeospatial.org/standards.

Abstract Specifications (AS) provide the conceptual foundation for most OGC specification development activities including open interfaces and protocols. Using the

AS enables interoperability between different brands and different kinds of geospatial processing systems. http://www.opengeospatial.org/standards/as.

Implementation Standards (IS) reflect an OGC consensus standard for application programming interfaces and related standards based on the Abstract Specification or domain-specific extensions to the AS. An implementation standard is considered to be at the implementation level of detail if, when implemented by two different software engineers in ignorance of each other, the resulting components plug and play with each other at that interface.

Within the OGC IS category of documents, there are five subtypes: Interface, Encoding, Profile, Application Profile, and Application Schema.

http://www.opengeospatial.org/standards/is.

The *OGC Reference Model* (ORM) describes the OGC Standards Baseline (SB) focusing on relationships between the baseline documents. The SB includes the approved OGC Abstract and Implementation Standards and Best Practice documents. Read more at: http://www.opengeospatial.org/standards/orm

The *OGC Modular Specification* contains requirements for writing standards to be used for any document whose eventual purpose is the specification of requirements for software, services or data structures. The Modular Specification also includes a set of testable constraints to which all OGC implementation standards must conform. Learn more at: https://portal.opengeospatial.org/files/?artifact_id=34762

WHY THE OGC EXISTS: HISTORY

The overarching requirement for the formation of the OGC was allowing for the free and open sharing of GIS data. Proprietary or vendor specific GIS data formats created barriers to entry for new technology, limited competition, and inhibited the ability to share data between organizations. Further, GIS data translation typically resulted in lost content or content that could not be converted from one system to another. This was due to major differences in the data models, semantics, vocabularies, and so on.

One of the primary and original business motivations for the OGC was to advance programs that would enrich the impact of research in support of public service / government programs. The research agenda was reflected in the initial contributions of resources from organizations including NASA, the Army Corps of Engineers, and NOAA. From this point on, OGC programs expanded significantly to address additional areas of interoperability need, and OGC membership has grown in response.

The organization changed its name from the "Open GIS Consortium" to the "Open Geospatial Consortium" in 2004. The currently (as of July 2015) 500+ member organizations now include a wider range of government agencies, IT companies, data providers, service providers and business analytics companies, as well as other universities, research institutions and NGOs – all engaged in advancing geospatial capability across their domains and enterprises.

Detailed history at: http://www.opengeospatial.org/ogc/history

Extensively detailed history at: http://www.opengeospatial.org/ogc/historylong

HOW THE OGC OPERATES: PROGRAMS OVERVIEW

OVERVIEW

The OGC staff facilitates a global consensus process that results in approved interface and encoding standards that enable interoperability among and between diverse geospatial data stores, services, and applications. In the OGC, geospatial technology users work with technology providers. Systems implementing OGC standards are intended to interoperate, whether those systems are running on the same computer or the same network. OGC standards provide essential infrastructure for the Geospatial Web, a network of geospatial resources that is thoroughly integrated into the Web.

There are four major programs in the OGC and each contributes to the successful adoption of OGC standards. In general, the four programs can be described as follows.

- The Standards Program develops and maintains OGC standards;
- The Interoperability Program tests and demonstrates interoperability amongst standards and identifies new requirements that lead to new or revised standards;
- The Compliance Program provides tests that ensure standards are implemented correctly in software; and
- The Communications and Outreach Program publicizes OGC standards to increase implementation by technology providers, uptake by technology users, and community participation in the OGC process.

STANDARDS PROGRAM

OGC provides a consensus standards process similar to other industry consortia. The Standards Program (SP) defines and manages how OGC standards are processed and adopted by the membership. The program contains four primary operating units:

- The OGC Technical Committee (TC)
- The OGC Architecture Board (OAB)
- The OGC Naming Authority (OGC-NA)
- The OGC Planning Committee (PC)

TECHNICAL COMMITTEE

The Technical Committee (TC) is where the formal standards development consensus discussion and approval process occurs. The many DWGs and SWGs comprise the TC.

Technical Committee Policies and Procedures (TC PnP) guide the work: http://docs.opengeospatial.org/pol/05-020r20/05-020r20.html.

A variety of TC FAQ and supporting documents are here:

http://portal.opengeospatial.org/index.php?m=projects&a=view&project_id=82&tab=2&artifact_id=22851.

In Domain Working Groups (DWGs), members discuss technical requirements, use cases, and issues related to the development and revision of OGC standards. DWGs present and discuss the results of OGC interoperability projects. Review the DWG listing at: http://www.opengeospatial.org/projects/groups/wg.

Standards Working Groups (SWGs) work on new (candidate) OGC standards or revisions to an existing OGC standard. Members and invited experts may participate. Each SWG initiative usually lasts from 6 months to 18 months. OGC Intellectual Property Rights policies, discussed above, are in full effect. Review the SWG listing at: http://www.opengeospatial.org/projects/groups/swg.

Access details for each DWG and SWG on the Portal:

https://portal.opengeospatial.org/?m=projects&tab=3.

See the listing of TC Policy Directives:

http://www.opengeospatial.org/ogc/policies/directives.

REQUEST FOR COMMENTS (RFC) – HOW MOST STANDARDS ENTER THE FORMAL TC PROCESS.

Quite often, an OGC member or members (or another standards organization, consortium or company) has a draft interface standard that is either developed and tested in an OGC Interoperability Program experiment or testbed, is already commercially available and/or is widely implemented. The member wants this draft standard to be recognized as an official, adopted OGC Standard. The RFC steps are:

1. RFC Submitter(s) contact the Technical Committee Chair (TCC) about their desire to submit a candidate standard.
2. RFC submitters commit to having considered the OGC standards baseline in the development of their submission. Any deviations or differences are noted and documented. If the OGC Abstract Specification is impacted, these impacts are noted and documented.
3. RFC submitters provide to the OGC a Candidate Standard (CS). The CS is accompanied by several other documents, as described in the RFC process. This bundle of documents is called an RFC Proposal. The Candidate Standard can be the result of work performed in an OGC Interoperability Initiative and documented in an IP Report. The RFC proposal package is submitted to the TCC includes:
   a. A cover letter that specifies the commitment of the organization to support the candidate standard submission.
   b. If required, a signed OGC SUBMISSION OF TECHNOLOGY FORM (This can be found at www.opengeospatial.org/legal).

    c. Any evidence of implementation of the CS, including prototypes and demonstration implementations.

    d. The CS. This is the actual document defining the standard and must be provided in the appropriate OGC standard template format. This template can be found on the OGC web site or can be provided by the TCC.

4. The TCC notifies the TC of the availability of a new RFC submission package.
5. The submission team develops a charter for a new SWG and announces it to the TC. The team submits the charter to the TCC for review.
6. A SWG is formed and a call to the TC membership is made. Member representatives can opt-in or not to work on the candidate standard.
7. The SWG votes as to whether the CS should be released for public comment.
8. The OAB reviews the candidate standard. Any OGC names (http URIs) are submitted to the OGC Naming Authority for review and approval.
9. The Request for Public Comment (RFC) uses normal OGC communications. The CS along with instructions is posted to the public section of the OGC web site.
10. Industry responds to the Request by submitting comments (these are delivered to the TC and to the RFC submitters). This comment period typically lasts 30 days. All comments must be provided to the OGC through the formal mechanism described in the RFC.
11. At the end of the comment period, all comments are packaged and sent to the SWG.
12. If required, the SWG then modifies the Candidate Standard and resubmits it back to the TCC along with a Response to the Comments. The SWG will need to modify the Candidate Standard if:

    a. A comment identifies an error in the candidate standard;

    b. A comment identifies an inconsistency in the candidate standard that makes it non-functional.

    c. A comment identifies a major inconsistency in the candidate standard that "breaks" interoperability with existing adopted OGC Standards.

13. Once all comments have been processed and the necessary changes made to the standard, the SWG votes to recommend to the TC for an IPR review and concurrent e-vote for adoption.
14. The TC adoption vote and 60 day IPR review period begins.

OGC standards process details: http://www.opengeospatial.org/ogc/process

COMMITTEES AND SUBCOMMITTEES

The *OGC Architecture Board* (OAB) works with the TC and the PC to ensure architectural consistency of the Baseline and provide guidance to the OGC membership to ensure strong lifecycle management of the OGC standards baseline. The OAB reviews all OGC standards and revisions to standards prior to public comment. Also, through general technology discussions and guidance, the OAB drives issue resolution. The OGC Membership nominates and elects the OAB. For more information about the OAB see: http://www.opengeospatial.org/projects/groups/oab

The *OGC Naming Authority* subcommittee (OGC-NA) controls the assignment of OGC Names to resources of interest in geographic information infrastructures. Part of any OGC standards development process is to submit lists of proposed URIs to the OGC-NA for review. There is an OGC registry and a resolver for assigned names. Current policy is to use http URIs and not URNs; read the policy documents here: http://www.opengeospatial.org/ogc/policies/directives#urn.   For   more   details   see: http://www.opengeospatial.org/projects/groups/ogcnasc.

The *Planning Committee* (PC) provides guidance and the management structure for the Technical Committee and the Interoperability Program. PC members participate in OGC business planning and market focus activities. The PC manages the Consortium's technology release process. It also approves special negotiated memberships and committee participation. To participate in PC activities, one must be a Principal or Strategic Member or a TC representative to the PC. Read more about the PC at: http://www.opengeospatial.org/projects/groups/pc.

The *Strategic Member Advisory Committee* (SMAC) provides Strategic Members the opportunity to participate in the strategic planning processes of the OGC, and to support OGC operations aimed at achieving the corporation's mission as defined in the bylaws. The SMAC operates in parallel with the formal technical decision-making process (Planning Committee and Technical Committee) of the OGC. The SMAC is the approval body for the Interoperability Program Policy and Procedures.

The *Business Value Committee* (BVC) directly engages senior managers and commercial, sales and marketing professionals from the OGC membership in activities to identify, organize and promote the business value of OGC standards. These activities include a long-term vision to develop (through case studies and reference implementations) a pervasive value platform for using OGC and complementary standards; as well as defining a business model to address a Standards Value Model, incorporating both costs and benefits.

 http://www.opengeospatial.org/projects/groups/businessvalue

OGC Staff Lead: Executive Director, Standards Program. Coordinates standards activities and chairs the Technical and Planning Committees.

INTEROPERABILITY PROGRAM

OGC's unique Interoperability Program (IP) conducts initiatives that build and exercise public-private partnerships to accelerate the development of emerging concepts and drive global trends in interoperability through rapid prototyping of new capabilities. The IP is a mechanism to align users and technology providers in a process of testing, prototyping, validating and demonstrating candidate approaches to new standards and standards-based best practices. This process allows OGC members to validate work in a practical, user community-based context before fully documenting and advancing a standard to adoption.

The IP allows initiative *sponsors* to pick specific interoperability problems for treatment by OGC member participants in test beds and pilot projects. Sponsors contribute financial resources and also drive the requirements, technical scope, agenda, demonstration form, and content of an initiative.

Initiative participants provide in-kind funding and also contribute to the definition of interfaces, prototypical implementations, and other engineering support.

IP initiatives include testbeds, pilots, support services, interoperability experiments, and concept development.

OGC *Testbeds* provide an environment for collaborative, fast-paced, multi-vendor rapid prototyping efforts to define, design, develop, and test candidate interface and encoding specifications. Deliverables include technical documentation, software implementations, and demonstrations.

OGC *Pilot Projects* apply and test OGC standards in real-world applications using standards-based products that implement OGC standards. Pilot Projects also help organizations identify gaps to be addressed by further standards development work.

OGC *Plugfests* are events where vendors cooperatively test (and possibly refine) their OGC-based products in a hands-on engineering setting. Plugfests are used to:

1. Assess the degree to which different products in the marketplace interoperate together through their implementations of OGC standards, and
2. Advance the interoperability of geospatial products and services based on OGC standards in general or within specific communities.

Watch the IP overview video: https://www.youtube.com/watch?v=pHpg8bzlJL4

Learn more about the IP: http://www.opengeospatial.org/ogc/programs/ip

View a list of active OGC initiatives:

http://www.opengeospatial.org/projects/initiatives/active

The IP uses IP Policies & Procedures documents to structure its work. See those important documents at: http://www.opengeospatial.org/ogc/policies/ippp

OGC Staff Lead: Executive Director, Interoperability Program

COMPLIANCE PROGRAM

OGC's Compliance Program provides robust standard compliance solutions for geospatial communities and a process whereby organizations can test compliance for OGC specifications and standards. The benefit to compliance testers is increased systems interoperability and reduced technology risks. The program offers compliance testing, certification, and branding services.

More information at: http://www.opengeospatial.org/compliance. Watch an introduction video: https://www.youtube.com/watch?v=teL-ikra6FM.

OGC offers a self-service Web Testing Facility that is free to any developer to use as often as they like to test their implementations of OGC standards. Using the testing facility does not require OGC membership. Yet there is a fee for compliance certification.

Testing steps to receive certification:

1. Go to http://cite.opengeospatial.org/teamengine and select the test suite.
2. Fill out the Test Results Form
3. Pay license fee
4. Get compliance certificate
5. Use certification mark

The *OGC® Compliance Overview - Guide for Software Acquisition* white paper provides an overview of the OGC compliance process. It describes the benefits of acquiring OGC compliant products, as opposed to products that implement OGC standards but have not been certified as being OGC compliant. The white paper also provides guidance regarding language to specify requirements for OGC compliant products in software acquisition (procurement) documents. https://portal.opengeospatial.org/files/?artifact_id=62815&version=1.

OGC Staff Lead: Executive Director of the OGC Compliance & e-learning Program

COMMUNICATIONS AND OUTREACH PROGRAM

The Communications and Outreach Program works with OGC members and user communities around the world to encourage implementation of OGC standards. The program also encourages new membership and engagement in OGC programs and initiatives.

The main objectives:

- *Outreach and education* – the program issues press releases, maintains a Web presence, is active in social networking, writes e-mail and print publications, organizes conferences and symposiums, and develops training modules. OGC also establishes dialog with organizations in industry sectors that have not yet been represented in OGC.
- *Strategic partnerships and alliances* - the OGC helps educate partner associations' members and participants about geoprocessing interoperability through seminars, workshops, conferences, formal training, and general marketing. Read more about Alliance Partners: http://www.opengeospatial.org/ogc/alliancepartners.
- *Regional and sector programs* – the OGC manages regional offices that address the special program needs of world regions, including Open Geospatial Consortium Europe, Limited (OGC-E) and OGC Australia. OGC regional and national forums provide for OGC Members to communicate on a country or

regional level, recognizing local language, cultural, and policy requirements. Learn more here: http://www.opengeospatial.org/ogc/regions.

The OGC has relationships with numerous standards organizations. Some of the relationships, such as the IETF, focus primarily on standards coordination and the use of OGC standards in IETF standards. Other relationships also include a much stronger marketing aspect, such as with the Open Grid Forum in which we do joint workshops and GSDI in which OGC staff participate at multiple levels.

Read more at: http://www.opengeospatial.org/ogc/programs/ocap

OGC Staff Lead: Executive Director, Communications and Outreach

WHO AT OGC HELPS: OGC STAFF AND BOARD

STAFF

The OGC staff facilitates the OGC standards and interoperability program activities, managing compliance testing and working with Members on outreach, education, and marketing. The staff has considerable experience in various aspects of geospatial technology and standards. OGC staff members ensure the proper operation of the organization's four main programs. Read more about the OGC staff members at: http://www.opengeospatial.org/ogc/organization/staff.

BOARD OF DIRECTORS

As the governing body, the Board of Directors oversees the business and affairs of the OGC. The Bylaws explain the Board's rights and responsibilities. More information about the Board and its current members is here:

http://www.opengeospatial.org/ogc/organization/bod.

OGC SPATIAL LAW AND POLICY COMMITTEE (SLPC)

In 2009, the Board of Directors chartered a committee of the Board to specifically address the "spatial law and policy issues" that will influence development requirements of the Consortium's technology process. The SLPC is an educational forum to include both select member and community participation. For more information, see: http://www.opengeospatial.org/ogc/organization/bod/slpc.

GLOBAL ADVISORY COUNCIL

The Global Advisory Council is a committee of the board that functions as a non-executive, "blue-ribbon" panel positioned to advise OGC concerning its global outreach and organizational strategies. The Council is chartered to become a significant, high-level and strategically motivated forum to represent OGC in global outreach activities and to

act as a center for education and worldwide member recruitment. It is also intended to introduce diversity of ideas and a truly global perspective into the strategic thinking of OGC's board and membership. The Council also enables the consortium to maintain a cohesive management core while affiliating many remarkable people with the OGC process who otherwise for political or financial reasons would find themselves disenfranchised from the consortium process. For more information about the Council, see: http://www.opengeospatial.org/ogc/organization/gac.

SECTION 3: OTHER RESOURCES & REFERENCES

A comprehensive list of OGC Acronyms: http://www.opengeospatial.org/acronyms.

OGC DOCUMENT TYPES

- Implementation Specifications - Standards
  - Basis for working software; detail the interface structure between software components
- Abstract Specifications
  - Conceptual foundation / reference model for spec development
- Best Practices
  - Describe use of specifications/standards
- Engineering Reports
  - Results from OGC Interoperability Program
- Discussion Papers
  - Forum for public review of concepts
- White Papers
  - State a position on a social, political, technical or other subject, often including a high-level explanation of an architecture or framework of a solution.

OGC document templates are available on the Portal:

https://portal.opengeospatial.org/?m=public&orderby=default&tab=5.

Document Type	Member Review	WG Actions	IPR Review	Vote Required
White Paper	Yes	No	No	Yes
Best Practices	Yes	Yes	No	Yes
Discussion Paper and Engineering Report	Yes	Yes	No	Yes
RFC/Candidate Standard	Yes	Yes	Yes	Yes

Figure: Key applicable policies by document type